UTAH PESTS fact sheet
EXTENSION UtahStateUniversity
Published by Utah State University Extension and Utah Plant Pest Diagnostic Laboratory ENT-209-19 June 2019

# Common Stink Bugs of Utah

Mark Cody Holthouse • Zachary R. Schumm • Diane G. Alston • Lori R. Spears

## Do You Know?

- There are over 300 species of stink bugs in North America.
- Stink bugs only fly as adults and not in the juvenile or 'nymph' stage.
- When feeding on plants, stink bugs release tissue dissolving enzymes that cause scarring and cat-facing on leaves, stems, and fruiting structures.
- Though most are herbivorous (plant feeding), some stink bugs are predatory and help control pest insect populations, including other stink bugs.

## Background

The term "stink bug" most commonly refers to a group of insects in the Family Pentatomidae, within the Order Hemiptera (the "true bugs"). As the name suggests, stink bugs exude foul smelling odors from glands on their thorax as a means of defense. Pentatomidae comes from the Greek terms pente- meaning "five" and –tomos, or "section". They have five antennal segments and five major body partitions (pronotum, scutellum, two hemelytra, and exposed wing membrane) in a shield-like shape that is easily recognizable when these insects are viewed from above (referred to later as dorsal view; Fig. 1). Stink bug hemelytra (singular hemelytron), or partial wing covers on their dorsal side, differentiate them from beetles which have full wing coverings called elytra. Stink bugs are also equipped with a piercing and sucking straw-like mouthpart called a proboscis, which is tucked under the ventral side (underside of body) of their abdomen. Stink bugs are hemimetabolous, meaning they develop from egg, to nymph (stage made up of multiple juvenile stages lacking wings), to the adult stage gradually without undergoing a pupal stage (Fig. 2), unlike beetles or buttterflies whose development requires a pupal stage to reach full maturity.

Stink bugs are both herbivores and carnivores so understanding how to identify them as a plant pest or a beneficial predator is a critical skill for a home gardener, commercial grower, or insect enthusiast. They are found in most climates around the world and many species feed on economically significant agricultural crops. Plant-feeding stink bugs commonly target reproductive structures, but also feed on vascular tissues in leaves and stems. Plant damage is often observed as necrotic lesions, cat-facing on fruit, dimpling, sunken areas below the plant cuticle, and corking below the skin in pome fruits.

Below is information on some of Utah's commonly encountered stink bugs, including what they look like, where to find them, and other key identifying characteristics.

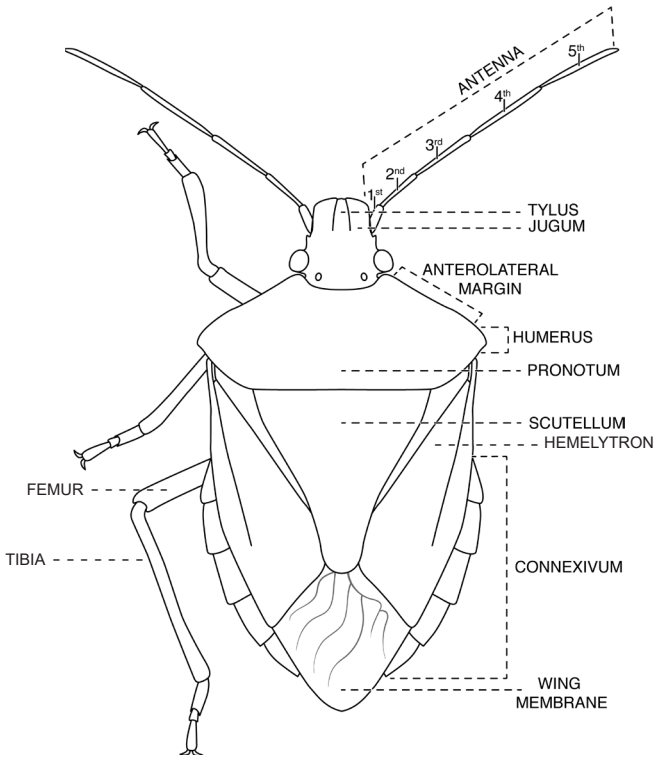


Fig. 1 Anatomy of an average adult stink bug. Refer to this image and associated terms throughout this fact sheet.

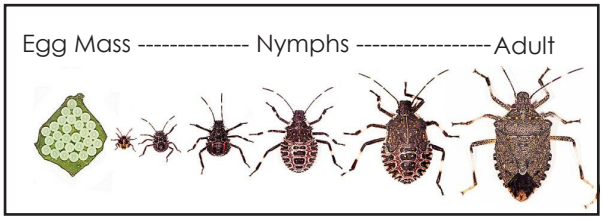


Fig. 2 Stink bugs hatch from eggs typically laid on leaves into wingless nymphs before developing into winged adults.

## Brown Marmorated Stink Bug

**Latin Name:** *Halyomorpha halys* **Status:** Invasive

**Size:** 12-17 mm (0.5-0.7 inch)

**Description:** Adults have a marbled brown and gray dorsum (top portion of body; Fig. 3), and a light gray/cream ventral surface (Fig. 4). Note that ventral coloration can vary depending on diet and sexual maturity. Antennae display two interspersed white bands, a unique trait not found in native stink bugs. The anterolateral margin of the pronotum (leading edge of shoulder plate) is smooth and entire. The connexivum (outer edge of abdomen) displays a white and black banding pattern.

**Habitat:** This invasive pest can be found on a wide variety of ornamental trees and shrubs, fruit, nut, and vegetable plants. It will also invade buildings in fall and winter months. Learn more about how to monitor and control this pest here and here.


Fig. 3


Fig. 4

## Conchuela Bug

**Latin Name:** *Chlorochroa ligata* **Status:** Native

**Size:** 12-17 mm (0.5-0.7 inch)

**Description:** This species displays variability in coloration, but in Utah most are either dark gray/charcoal (Figs. 5 and 6) or a lighter brown/burgundy (Figs. 7 and 8) in the adult stage. Their connexivum is a pale yellow or cream color and this color faintly highlights the entire margin of the thorax as well. The tip of the scutellum (triangular plate between wings) is lighter in color and both the antennae and legs are uniformly dark in color.

**Habitat:** These stink bugs are found on ornamental shrubs and trees, especially those in the Family Fabaceae. Some agriculturally significant host plant species include sorghum, cotton, alfalfa, and hemp.


Fig. 5


Fig. 6


Fig. 7


Fig. 8

## Green Stink Bug

**Latin Name:** *Chinavia hilaris* **Status:** Native

**Size:** 13-19 mm (0.5-0.75 inch)

**Description:** The green stink bug is one of the largest in Utah and is easily recognized by its uniform green body coloration. Adults have yellow and black notches/bands on the connexivum (Fig. 9). The ventral body coloration is also entirely green (Fig. 10). The wing membrane is clear and lacks any markings.

**Habitat:** Ornamental trees and shrubs are their most common hosts. Some economically significant host plants include cotton, corn, tobacco, and some specialty fruit crops. This species is problematic in the southern U.S.


Fig. 9


Fig. 10

## Onespotted Stink Bug

**Latin Name:** *Euschistus variolarius* **Status:** Native

**Size:** 11-15 mm (0.4-0.6 inch)

**Description:** The dorsal side of the body is primarily light brown with a dark speckling pattern. The wing membrane is entirely dark brown in color (Fig. 11). Adults are also recognized by their cinnamon colored ventral side, antennae, and legs (Fig. 12). Though the connexivum pattern is similar to other stink bugs with its display of black bands, the alternating cinnamon/brown color is unique to this species.

**Habitat:** These stink bugs are found on ornamental shrubs and trees.


Fig. 11


Fig. 12

## Rough Stink Bug

**Latin Name:** *Brochymena sulcata* **Status:** Native

**Size:** 12-16 mm (0.5-0.6 inch)

**Description:** This stink bug species has cryptic coloration and texture, resembling a piece of bark or lichen on a tree. The entire body is is spotted and has light gray and black/brown coloration (Figs. 13 and 14). Each leg has two light colored bands and the connexivum has alternating black and light gray/tan bands. The anterolateral margin of the pronotum has saw-like serrations (Fig. 13).

**Habitat:** Rough stink bugs are found on many different ornamental shrubs and trees. Though they are primarily herbivorous, there are documented cases of them feeding on soft bodied juvenile insects like caterpilllars or beetle larvae.


Fig. 13


Fig. 14

## Say Stink Bug

**Latin Name:** *Chlorochroa sayi* **Status:** Native

**Size:** 12-17 mm (0.5-0.7 inch)

**Description:** The Say stink bug is usually green (varies between light to dark green) both in body and leg coloration (Figs. 15 and 16). The yellow/cream color on the connexivum and outer margin of the thorax is prominent. The scutellum and hemelytra display speckling or patches of lighter colored markings. Unlike the Conchuela bug, which displays only one light colored patch on the rear tip of the scutellum (Figs. 5 and 7), Say stink bug displays multiple light patches on its scutellum (Fig. 15).

**Habitat:** These stink bugs are found on ornamental shrubs and trees.


Fig. 15


Fig. 16

## *Menecles insertus*

**Latin Name:** *Menecles insertus* **Status:** Native

**Size:** 8-14 mm (0.3-0.6 inch)

**Description:** The pronotum is prominent and wraps around the posterior portion of the head. A lightly colored line runs from the anterior margin of the pronotum to the middle of the scutellum (Fig. 17). Adult coloration is primarily brown with tiny light colored spots uniformly distributed over the entire body and legs (Figs. 17 and 18). The connexivum has only a faint brown and black pattern and the antennae are entirely brown.

**Habitat:** These stink bugs are found on ornamental shrubs and trees.


Fig. 17


Fig. 18

## Red-Backed Stink Bug

**Latin Name:** *Banasa dimidiata* **Status:** Native

**Size:** 7-10 mm (0.3-0.4 inch)

**Description:** The adult stage exhibits a brilliant lime green color on the legs, scutellum (Fig. 19), and ventral side of the abdomen and thorax (Fig. 20). The hemelytra and posterior portion of the pronotum is burgundy, along with the head and antennae (Fig. 19). The outer surface of the body displays a metallic sheen under direct light.

**Habitat:** These stink bugs are found on ornamental shrubs and trees.


Fig. 19


Fig. 20

## Jade or Juniper Stink Bug

**Latin Name:** *Banasa euchlora* **Status:** Native

**Size:** 7-10 mm (0.3-0.4 inch)

**Description:** Adults dsiplay a deep green coloration over their entire body, with faint light green or yellow markings on the hemelytra, anterolateral margin of the pronotum, and corners of the scutellum (Fig. 21). The ventral side has both dark and light green markings (Fig. 22). The connexivum has alternating dark and light green bar patterning (sometimes hard to view). The antennae are entirely green.

**Habitat:** These stink bugs are most commonly found feeding on *Juniperus spp*. or plants in the Family Cupressaceae.


Fig. 21

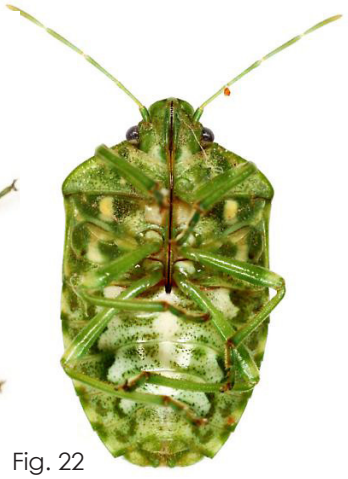
Fig. 22

## *Thyanta spp.*

**Latin Name:** *Thyanta spp.* **Status:** Native

**Size:** 10-16 mm (0.4-0.6 inch; Most species)

**Description:** Most local *Thyanta* species are green with certain species displaying black or red markings on the pronotum in either a line or band of color on the posterior or anterior margins. Most *Thyanta* have black speckling on their wing membrane (Fig. 23). Some less common species are pale brown or gray in body color. *Thyanta* may be confused with the green stink bug, but are generally smaller than the green stink bug and lack yellow and black alternating markings on the connexivum (Figs. 23 and 24).

**Habitat:** These stink bugs inhabit ornamental shrubs and trees.


Fig. 23


Fig. 24

## *Cosmopepla uhleri*

**Latin Name:** *Cosmopepla uhleri* **Status:** Native

**Size:** 4-5 mm (0.2 inch)

**Description:** This species is unique in its smaller size relative to other stink bugs found in Utah. The defining characteristic for this species lies in the mottled yellow/orange coloration on the anterior portion of the pronotum, along with the outer margin of the abdomen and connexivum. The ventral portion of the stink bug is completely black in color, along with a majority of the hemelytra and wing membrane.

**Habitat:** This species is commonly found on Columbine (*Aquilegia spp.*).


Fig. 25


Fig. 26

## *Holcostethus abbreviatus*

**Latin Name:** *Holcostethus abbreviatus* **Status:** Native

**Size:** 6-9 mm (0.2-0.4 inch)

**Description:** At first glance, this species may look similar to the brown marmorated stink bug, but has a smaller body size, solid brown antennae, and a white spot at the posterior tip of the scutellum (Fig. 27). The angle of the humerus is more rounded when compared to other stink bugs that display this gray marbled coloration (Fig. 28). The head structure is also unique, with the tylus (nose-like indent on head) being completely enclosed by the jugum (front of head) (Fig. 27).

**Habitat:** These stink bugs are found on ornamental shrubs and trees.


Fig. 27


Fig. 28

## Spined soldier bug

**Latin Name:** *Podisus maculaventris* **Status:** Native

**Size:** 8.5-13 mm (0.3-0.5 inch)

**Description:** Adults have a marbled brown body with solid brown antennae. The wing membranes protrude beyond the abdomen with black markings down the center (Fig. 29). The mouthparts are thicker than those of herbivorous stink bugs (Fig. 30). The humerus is acutely angled into a spine-like projection. The connexivum has alternating light brown and black bands (Fig. 29). The hind legs have black dots on the distal region of the femur (Fig. 30).

**Habitat:** Spined soldier bugs are often found in residential gardens and on ornamental plants (e.g., goldenrod, yarrow, or bishop's weed). They feed on a variety of small arthropods such as caterpillars and beetle grubs.

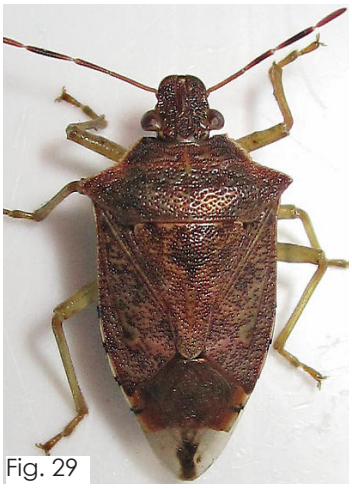
Fig. 29

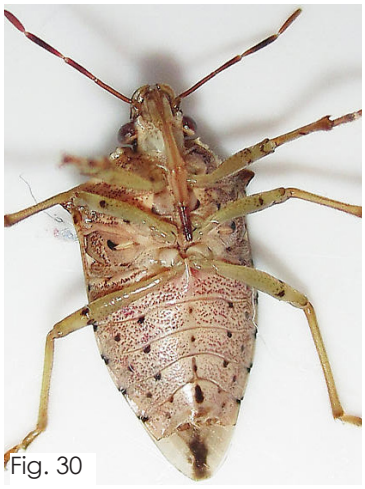
Fig. 30

## *Podisus placidus*

**Latin Name:** *Podisus placidus* **Status:** Native

**Size:** 8.5-13 mm (0.3-0.5 inch)

**Description:** As with other stink bugs in this genus, *P. placidus* displays a brown-black alternating band pattern on the connexivum and has a marbled brown dorsal coloration (Fig. 31). Note the absence of black spots on the femur (Fig. 32) and black markings on its wing membranes (Fig. 31). In Utah, individuals are commonly described as having hints of orange-brown coloration in direct sunlight.

**Habitat:** These stink bugs are found on ornamental shrubs and trees and feed on small insects.


Fig. 31


Fig. 32

## Twospotted stink bug

**Latin Name:** *Perillus bioculatus* **Status:** Native

**Size:** 8.5-11 mm (0.3-0.4 inch)

**Description:** Adult coloration can vary between pale tan, orange, and red depending on diet. Black markings cover most of the body and their patterns are fairly uniform between color variants, displaying two black bars or spots on the anterior portion of the pronotum and a thick black bar pattern on the posterior portion (Figs. 33 and 34). The scutellum has two concentric color markings that resemble the capital letter Y or a lock keyhole. Each leg has a white band on the middle portion of the tibia (Fig. 35). The color patterns on the hemelytra can vary.

**Habitat:** These stink bugs are found on ornamental shrubs and trees. They are also commonly found on potato plants where they prey on Colorado potato beetle larvae.


Fig. 33


Fig. 34


Fig. 35

## COMMONLY ENCOUNTERED STINK BUG EGGS

Stink bug eggs are generally round or barrel-shaped in appearnce and laid in a mass of multiple eggs. The average number of eggs per egg mass varies by species. Eggs generally require between 4-8 days to fully develop and hatch depending on temperature, photoperiod, and species. As the eggs mature, their color may change and "egg bursters" (small triangular markings) used to pierce through the egg cap during hatch, will begin to appear on the top of the eggs. Some egg caps will have ornate spines protruding outward (Fig. 42). Some eggs may appear abnormally dark or exhibit damage caused by parasitoids.

Brown Marmorated Stink Bug

Fig. 36

Conchuela Bug

Fig. 37

Green Stink Bug

Fig. 38

*Thyanta custator*

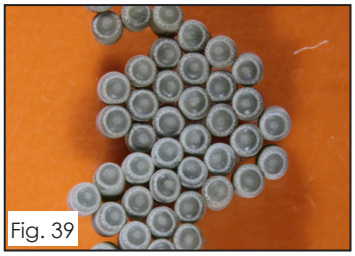

Fig. 39

Red-Backed Stink Bug

Fig. 40

*Holcostethus abbreviatus*

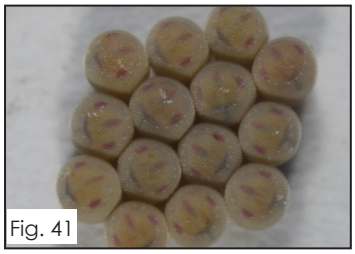

Fig. 41

Spined Soldier Bug

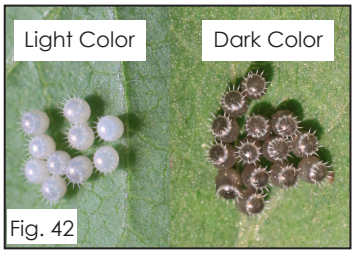


Fig. 42

Twospotted Stink Bug

Fig. 43

## COMMONLY ENCOUNTERED STINK BUG NYMPHS

Photographs below depict a selection of nymphal instars for the stink bug species described above. Most Pentatomidae have five nymphal instars before reaching the mature adult stage. The first instar nymphs feed on the egg mass and leave only after the second instar molt. Note color and morphological differences between develpmental stages. Stink bug species that look very different as adults may look nearly identical in early development.

Brown Marmorated Stink Bug

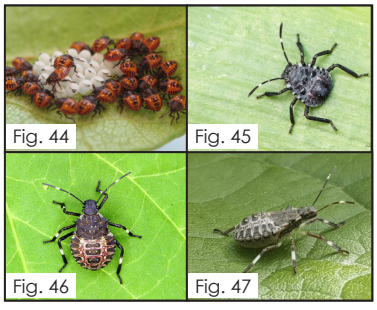

Fig. 44 Fig. 45 Fig. 46 Fig. 47

Conchuela Bug

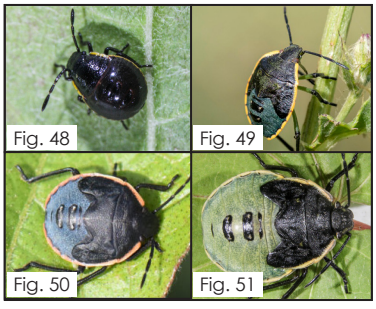

Fig. 48 Fig. 49 Fig. 50 Fig. 51

Green Stink Bug

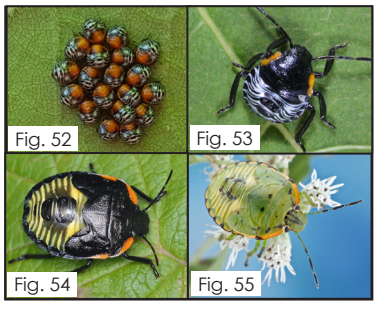

Fig. 52 Fig. 53 Fig. 54 Fig. 55

*Thyanta custator*

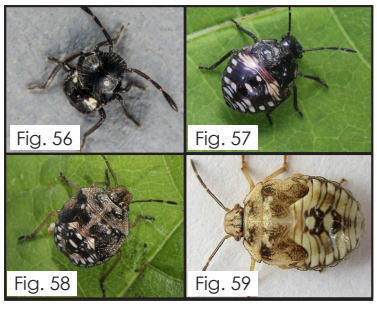

Fig. 56 Fig. 57 Fig. 58 Fig. 59

Red-Backed Stink Bug

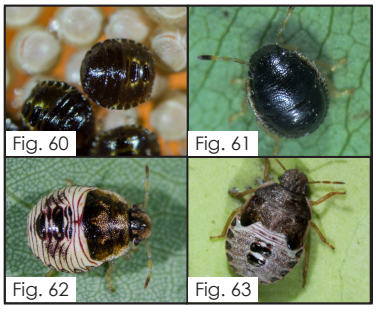

Fig. 60 Fig. 61 Fig. 62 Fig. 63

*Holcostethus abbreviatus*

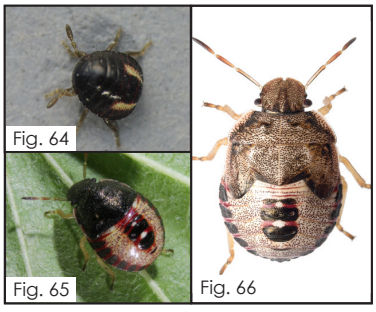

Fig. 64 Fig. 65 Fig. 66

Spined Soldier Bug

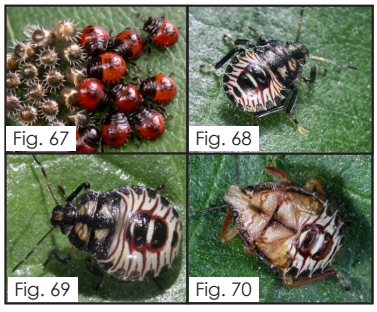

Fig. 67 Fig. 68 Fig. 69 Fig. 70

Twospotted Stink Bug

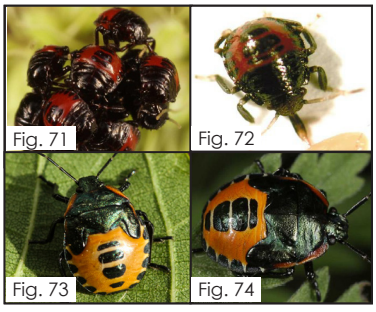

Fig. 71 Fig. 72 Fig. 73 Fig. 74

# References


**Figure/Image Credits**

1 Image courtesy of A.K. Tran from *Identification, Biology, Impacts, and Management of Stink Bugs (Hemiptera: Heteroptera: Pentatomidae) of Soybean and Corn in the Midwestern United States*
2 Image courtesy of Mike Lewis
3-4, 6-8, 10, 12-14, 36, 47, 52 Images courtesy of Mark Cody Holthouse, Utah State University
5 Image courtesy of Kerry S. Matz
9, 26-27, 39-41, 48, 51, 53, 56-58, 60-66, 68-70, 73 Images courtesy of Oregon Department of Agriculture
11 Image courtesy of Nicky Davis via www.wildutah.us
15-16, 22, 33, 35, Images courtesy of Salvador Vitanza
17-18 Images courtesy of Emily Butler
19 Image courtesy of Gayle and Jeanell Strickland via www.bugguide.net
20 Image courtesy of Nick Dean via www.hiveminer.com
21 Image courtesy of Mike Quinn
23 Image courtesy of Tom Murray
24 Image courtesy of Peter Bryant
25 Image courtesy of Megan Asche
28, 59 Images courtesy of Jim Moore
29-30 Image courtesy of John R. Maxwell
31 Image courtesy of Steven Mlodinow
32 Image courtesy of Ilona Loser
34 Image courtesy of Kevin Arvin
37 Image courtesy of Whitney Cranshaw, Colorado State University via www.Bugwood.org
38 Image courtesy of MJ Hatfield
42 Image courtesy of Leslie Abram
43, 71, 74 Images courtesy of Claude Pilon
44 Image courtesy of Ryan Davis, Utah State University
45 Image courtesy of Jivko Nakev
46 Image courtesy of New Jersey Agricultural Experiment Station, Rutgers University
49 Image courtesy of David Badke
50 Image courtesy of Suhas Vyavahare, Texas A&M University
54 Image courtesy of Ryan Hodnett
55 Image courtesy of Colin Hutton
67 Image courtesy of Bill Keim
72 Image courtesy of Conrad Cloutier



**Fundining**

Funding for this publication was made possible by the National Institute of Food and Agriculture, U.S. Department of Agriculture, Specialty Crop Research Initiative (under award number 2016-51181-25409), Animal and Plant Health Inspection Service, U.S. Department of Agriculture, Plant Protection and Quarantine (USDA-APHIS-PPQ) (under cooperative agreement number AP18PPQFO000C197), Utah Agricultural Experiment Station, and Utah State University Extension.



**Additional Resources**

Hedstrom, C. 2016. Stink Bugs of Oregon. (4 pp.) Oregon Department of Agriculture Insect Pest Prevention & Management Program, Salem, OR. Retrieved from https://www.oregon.gov/ODA/shared/Documents/Publications/IPPM/StinkBugGuide.pdf.

Holthouse, M.C., Alston, D.G., Spears, L. R, and Petrizzo, E. 2017. Brown marmorated stink bug [*Halyomorpha halys* (Stål)] (8 pp). Utah State University Extension Fact Sheet Ent-144-17, Logan, UT.

Paiero, S.M., Marshall, S.A., McPherson J.E.,, and Ma, M.-S. 2013. Stink Bugs and Parent Bugs of Ontario. *Canadian Journal of Arthropod Identification.* Retrieved from https://cjai.biologicalsurvey.ca/pmmm_24/intro.html.

Schumm, Z. R., Holthouse, M. C., Mizuno, Y., Alston, D. G. and Spears, L. R. 2019. Parasitoid wasps of the invasive brown marmorated stink bug in Utah (6 pp.). Utah State University Extension Fact Sheet Ent-198-19, Logan, UT.

Spears, L.R., Davis, R., and Ramirez, R. 2015. Invasive insect look-alikes: mistaken insect identity (6 pp). Utah State University Extension Fact Sheet Ent175-15-PR, Logan, UT.

Stopbmsb.org
A comprehensive website on BMSB identification, management, and new research.